

ABSTRACT

A ceramic tape is provided in its green state so that it is malleable and formable to a mold for forming a dental restoration, but will not break or crack as it is applied to the mold. Pressure may be applied to further form or adapt the ceramic tape to the shape of the mold.

5 Heat is applied simultaneously with pressure or in a separate step to achieve high density and strength in the ceramic material. A vacuum atmosphere may be used with the application of pressure and/or heat. One or more layers of surface material such as porcelain or composite resin may be applied to the ceramic to form the dental restoration. The process is useful in the manufacture of dental materials or restorations including but not limited to orthodontic

10 appliances, bridges, space maintainers, tooth replacement appliances, splints, crowns, partial crowns, dentures, posts, teeth, jackets, inlays, onlays, facing, veneers, facets, implants, abutments, cylinders, and connectors.

Also provided is a ceramic powder in combination with one or more media materials to form a homogeneous mixture. The mixture may then be used to form a dental restoration

15 as is or may be used to form feedstock such as filaments or wires which are then used to fabricate a dental restoration. The filaments or wires may be used in a fused deposition-modeling machine to build dental restorative materials by computer aided design software.